

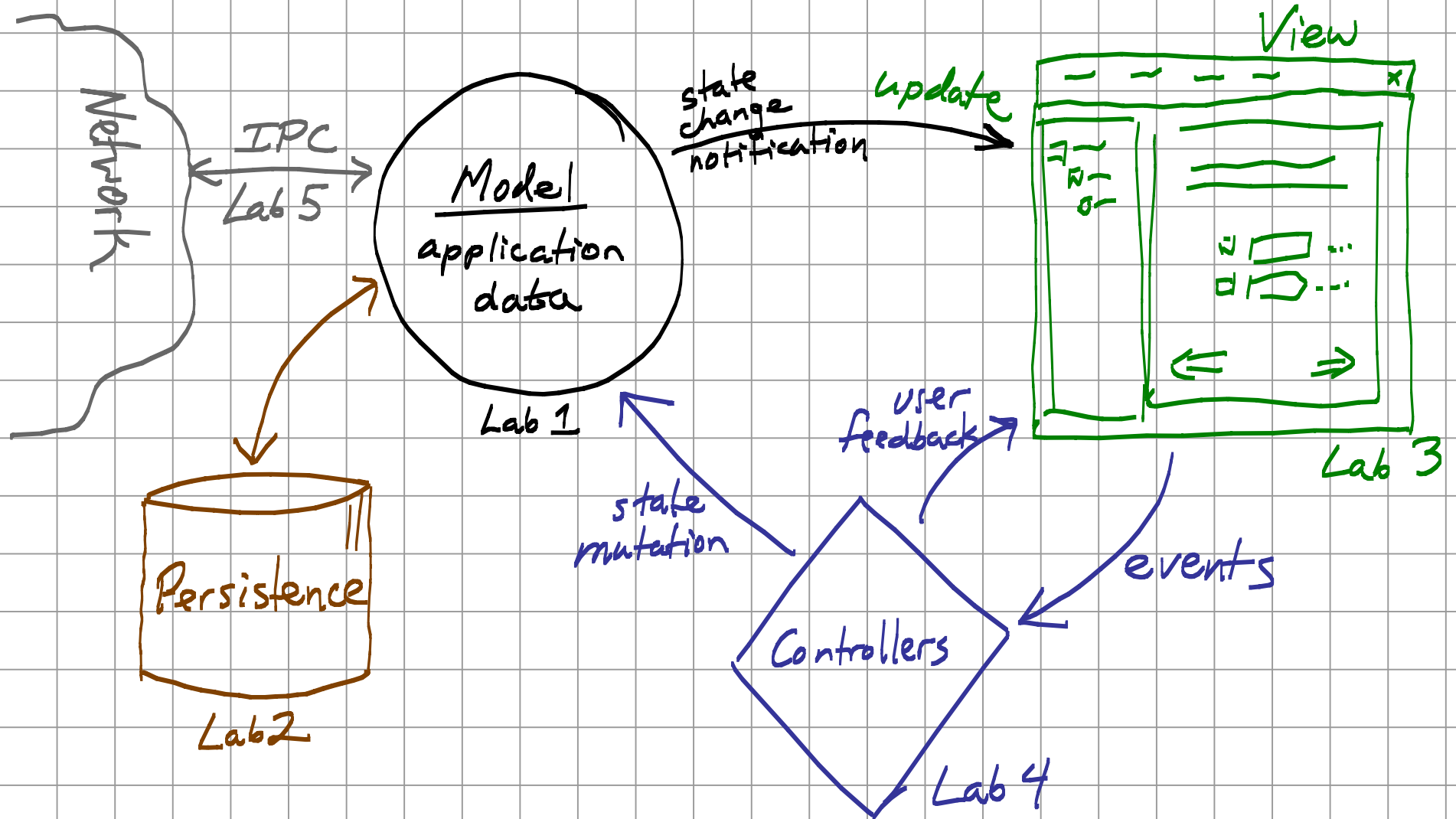
Designing + Building User Interfaces

Note Title

2/15/2007

- MVC - Model/View/Controller Architecture
- View components provided by Java (awt and swing)
- Nesting components to create a composite user interface (UI)
- Design Principles for Graphical User Interfaces (GUIs)
- GUI design exercise
- Critique

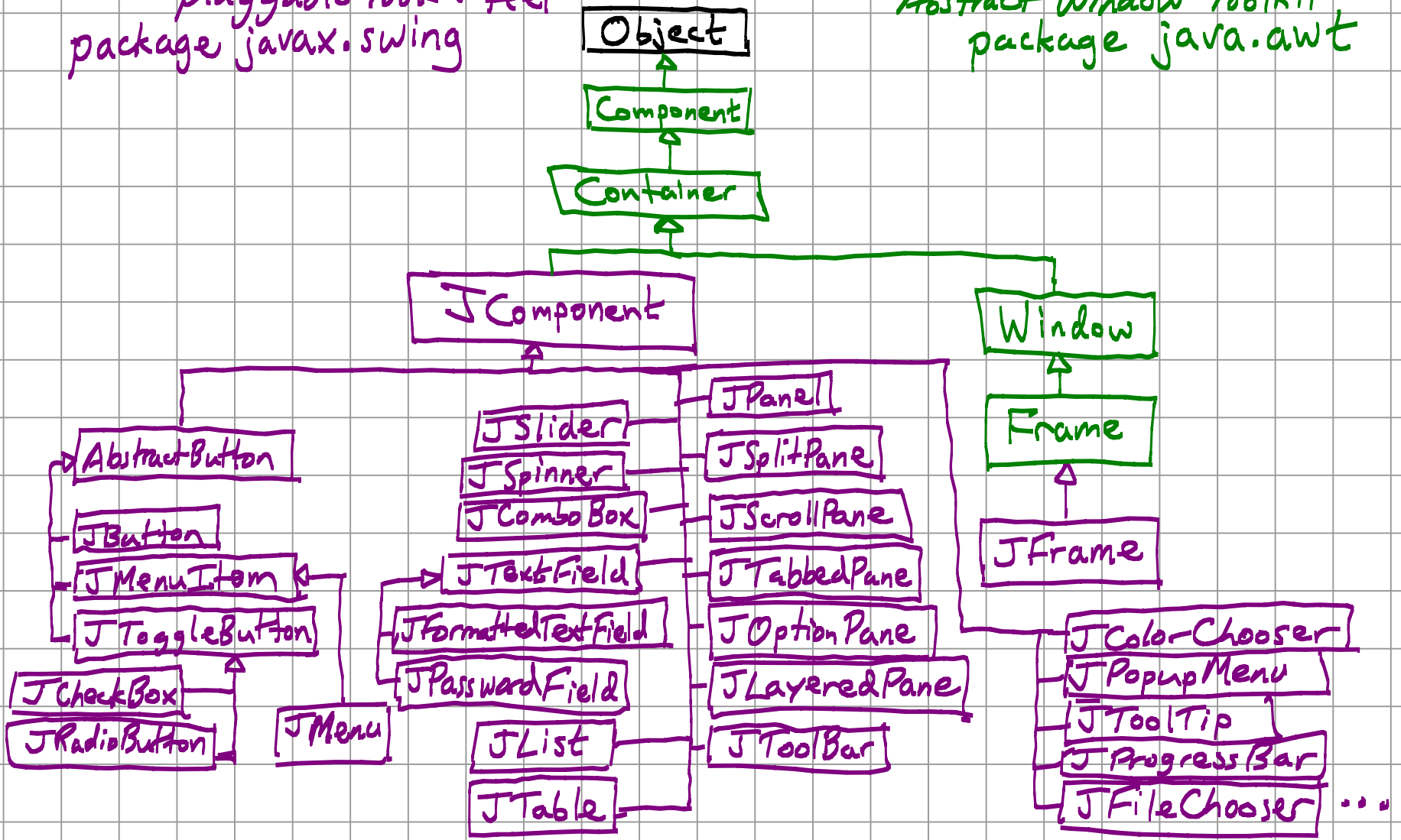
MVC - Model/View/Controller Architecture



Java's view components (swing / awt)

"pluggable look & feel"
package javax.swing

"Abstract Window Toolkit"
package java.awt



See examples at

http://java.sun.com/docs/books/tutorial/uiswing/components/components_pics.html

But...

having pretty components does NOT imply that a UI is

- easy + intuitive to learn
- easy + comfortable to use
- aesthetically pleasing
- efficient for beginners
- efficient for advanced users
- natural for the application domain
- responsive
- scalable to demanding uses

Some UI design principles:

✱ Provide interaction using vocabulary of the application domain

✱ Direct manipulation

- WYSIWYG
- Physically obvious + intuitive pointer motion
- Labeled buttons for actions
- Immediate display of results w/ intermediate feedback
- Easily reversible commands (UNDO)

✱ Modeless design (few dialog boxes, few tool modes)

✱ Avoid clutter

✱ Consistency across multiple applications (familiarity)

UI Design Exercise:

- CSE department needs to manage the assignment of people to offices
- Office assignments change only occasionally
- Visitors want to find where people are located & see office hours & contact info
- Faculty would like their graduate students nearby
- Each person has 1 office
- Graduate student offices may hold multiple people
- The floorplan is available as an image file
- You have a still camera, a video camera, and a microphone

Countdown: 2 min.

By Name:

John Doe

Search

By Office:

#

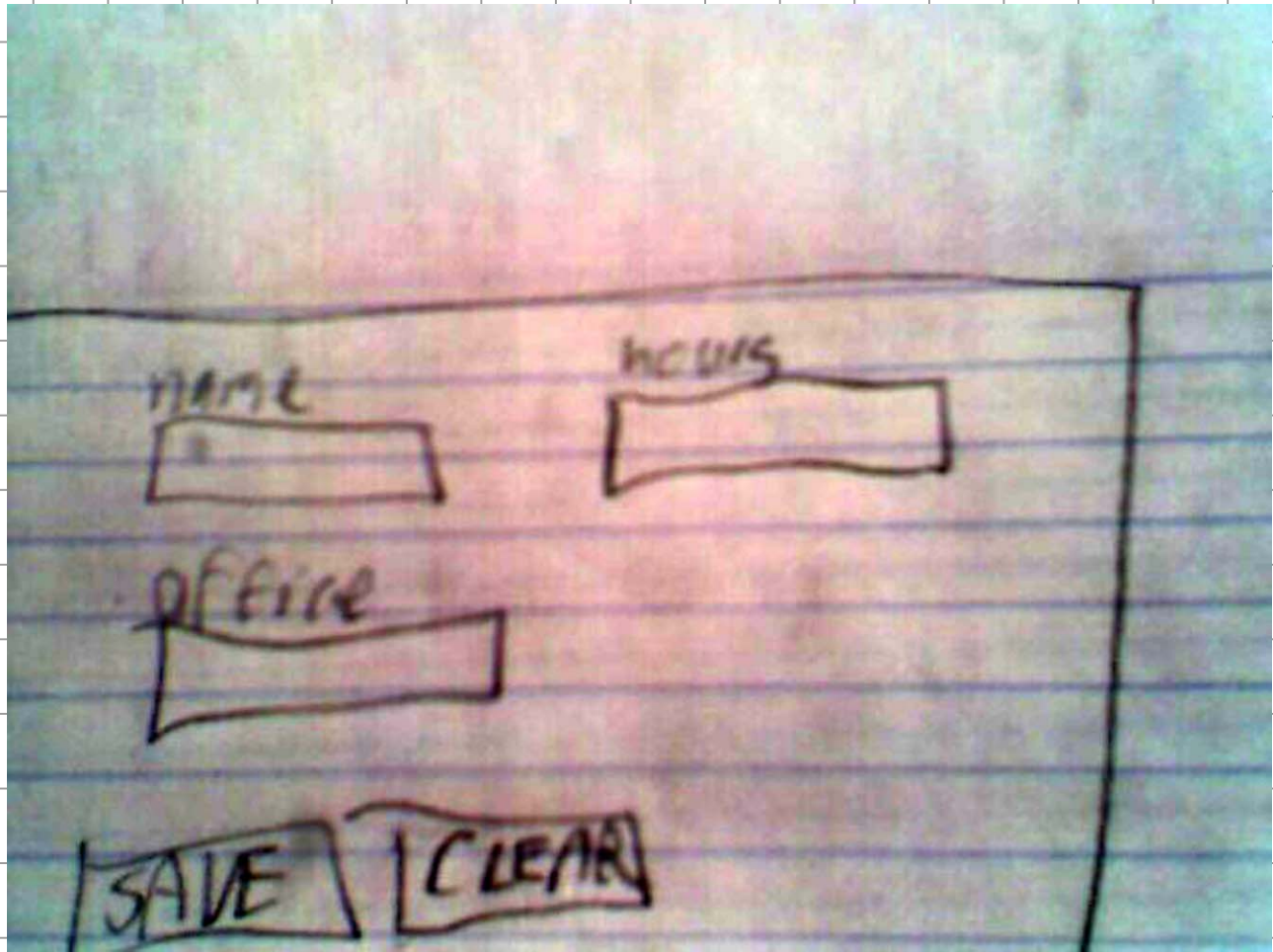
Clear

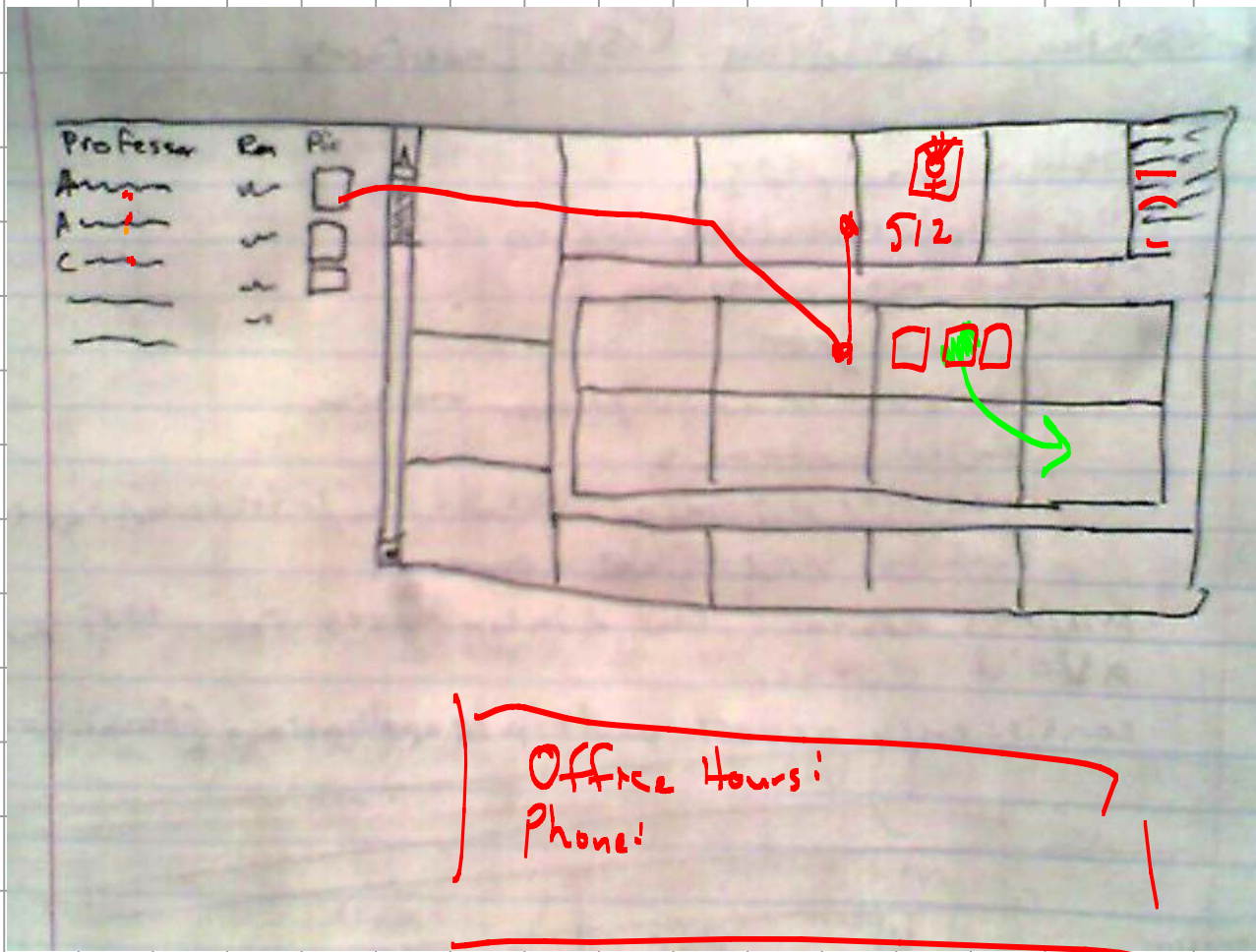
John Doe Phone: 555-5555
Office: 555
Hours: 1-2 PM



Edit Info

552	551	555





Add GPS

Error checking

- unobtrusive
- dynamic — as you go

Debug mode?

* Prevent errors in GUI